San German Ground Water Contamination Site

Puerto Rico

EPA ID#: PRN000205957

EPA REGION 2

Congressional District(s): 02

San German Municipality
San German, Puerto Rico

NPL LISTING HISTORY
Proposed Date: 9/12/2007
Final Date: 3/19/2008

Site Description

The San German Well field Contamination site (a.k.a. the San German Ground Water Contamination site) is located in the municipality of San German, southwest of Puerto Rico (180 05' 04.1" North latitude and 670 02' 07.1" west longitude). San German is located in the southwestern region of the island, south of Mayaguez and Maricao; north of Lajas; east of Hormigueros and Cabo Rojo; and west of Sabana Grande. The San German land area is approximately 140 sq km (54.0 sq mi) and according with the 2000 Census has a population of 37,704 and a population density of 264.2 per sq km (687.1 per sq mi). The drinking water supply for San German relies on local surface and ground water. Nearby manufacturing facilities and various industrial activities in the area have most likely contributed to the contamination of these wells. The main contaminants of concern are tetrachloroethylene (PCE) and trichloroethylene (TCE) which are solvents used in areas such as degreasing, industrial cleaning, and dry cleaning.The site consists of a groundwater plume with no identified source(s) of contamination.

The San German Urbano public water supply system (ID No. PR0003323) consists of seven (7) wells and two (2) surface water intakes serving an estimated population of 25,000 people. Three of these wells (i.e., Retiro, Lola Rodriguez de Tio I (hereinafter referred as “Lola I”) and Lola Rodriguez de Tio II (hereinafter referred as “Lola II”) acted as an independent interconnected system with approximately 800 connections and served an estimated population of 2,280 people in 2005. Quarterly ground water samples collected by the system’s operator, the Puerto Rico Aqueduct and Sewer Authority (PRASA), indicated that chlorinated solvents tetrachloroethylene (PCE), and cis-1,2-dichloroethylene (cis-1,2 -DCE) have been detected in all three wells during the period 2001 to 2005. The maximum concentration of PCE and cis-1,2-DCE detected in these wells during this period were 6.4 micrograms per liter and 1.2 micrograms per liter, respectively.

Threat and Contaminants

On January 17, 2006, the Puerto Rico Department of Health (PRDOH) ordered PRASA to close Retiro well because of the PCE concentration exceeded the federal Maximum Contamination Level (MCL) of 5 ug/l. The order indicated that in addition to being detected in the Retiro well, PCE was also detected in tap water samples collected from distributed water. In January 19, 2006; PRASA responded to this order by taking the well out of operation on and; on February 1, 2006 the pump was removed.

On June 2006, the US Environmental Protection Agency (EPA) collected groundwater and distribution water samples and confirmed the presence of PCE (1.6 ug/L) and cis-1,2-DCE (1.5 ug/L) in Lola I. Trichloroethylene (TCE) was also detected in this well at a concentration of 0.54 ug/L. Samples collected from background well “El Real” showed non-detects for PCE, cis-1,2-DCE and TCE.

Cleanup Approach

On July 2006, EPA conducted a reconnaissance effort at 44 sites within the municipality of San German as part of a Site Discovery Initiative to identify potential hazardous wastes sites. In January 2007, EPA conducted a source investigation in San German which were identified as potential sources to ground water plume. This investigation included two Preliminary Assessment/Site Inspections (PA/SI) and one Expanded Site Inspection (ESI). These investigations included the use of direct-push technology to complete soil borings at each of the facilities. Surface and subsurface soil samples and ground water samples were collected from these borings. Although chlorinated solvents were detected at two of these faculties, EPA did not identify the source of ground water contamination in the public supply wells.

Cleanup Progress

If a PRP is not identified, EPA will initiate a full fund lead Remedial Investigation (RI) followed by a Feasibility Study (FS), both to be initiated early FY-2008.

Site Repositories

US EPA Region 2 / New York Regional Office / Superfund Program Emergency and Remedial Response Division (ERRD) / 26-th Floor 290 Broadway Ave., New York, NY 10007

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